News Release

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EPA and LDEQ Report Potential Health Risks from Sediments

Eighteen sediment samples from across the New Orleans area were collected by the Environmental Protection Agency and Louisiana Department of Environmental Quality on Sept. 10, 2005, and analyzed for bacteria and chemicals.

Sediment, for the purposes of the hurricane response sampling effort, is defined as residuals deposited by receding flood waters which may include historical sediment from nearby water bodies, soil from yards, road and construction debris and other material. Preliminary results indicate that some sediment may be contaminated with bacteria and fuel oils and human health risks may therefore exist from contact with sediment deposited from receding flood waters. As sediments begin to dry, EPA will perform air sampling to monitor potential inhalation risks and will also assess long-term exposure scenarios.

E. coli was detected in sediment samples but no standards exist for determining human health risks from E. coli in soil or sediment. The presence of E. coli, however, does imply the presence of fecal bacteria and exposure to sediment should therefore be limited if possible. In the event contact occurs, EPA and the Centers for Disease Control strongly advise the use of soap and water, if available, to clean the exposed areas, and the removal of contaminated clothing.

Additional chemical sampling was performed for pollutants such as volatile organic compounds, semivolatile organic compounds, total metals, pesticides and total petroleum hydrocarbons. Some of the semi-volatile organic compounds, such as diesel and fuel oils, were detected at elevated levels and may persist in the environment. These compounds pose a dermal or skin irritation problem if they get onto bare or broken skin. Skin contact with fuel oils for short periods may cause itchy, red, sore, or peeling skin. Breathing some fuel oils for short periods of time may cause nausea, eye irritation, increased blood pressure, headache, light-headedness, loss of appetite, poor coordination, and difficulty concentrating. Breathing diesel fuel vapors for long periods may cause kidney damage and lower the blood's ability to clot. If contact with fuel oil occurs, NIOSH recommends washing with soap and water, flushing of the eyes, removal of contaminated clothing, and immediate medical attention if ingestion of fuel oil contaminated media occurs. Additional information concerning fuel oils may be found on the ATSDR ToxFAQs for fuel oils: http://www.atsdr.cdc.gov/tfacts75.html.

The levels of metals detected were below levels that would be expected to produce adverse health effects. Overall, three samples had slightly elevated arsenic and lead levels. The level of lead detected is typical of that found in urban areas. Volatile organic compounds were detected at very low levels. VOCs are not expected to persist in sediment due to their high vapor pressures and will dissipate or volatilize into the air. Polycyclic aromatic hydrocarbons were also detected at levels below that which would be expected to produce adverse health effects. Polycyclic aromatic hydrocarbons are a group of more than 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat and are commonly found in the environment. These initial sediment results represent the beginning of extensive sampling efforts and may not characterize the condition of all sediments throughout the area.

In conclusion, direct frequent contact with sediments containing petroleum hydrocarbons/fuel oils and E. coli at the levels detected in the samples may cause adverse health effects. The levels of other chemical contaminants detected in sediment are not expected to result in adverse health effects. EPA recommends avoiding all contact with sediment deposited by the flood water, where possible.

For additional information on EPA's response to Hurricane Katrina go to: http://www.epa.gov/katrina

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